UNITED
NATIONS

E

Economic and Social Council

Distr.
GENERAL

E/CN.17/1997/2/Add.19
22 January 1997

ORIGINAL: ENGLISH

COMMISSION ON SUSTAINABLE DEVELOPMENT
Fifth session
7-25 April 1997

# Overall progress achieved since the United Nations Conference on Environment and Development

## Report of the Secretary-General

## Addendum

## Environmentally sound management of hazardous wastes, including prevention of illegal international traffic in hazardous wastes*

(Chapter 20 of Agenda 21)

CONTENTS


| | | Paragraphs | Page |
|---|---|---|---|
| I. | KEY OBJECTIVES | 1 - 3 | 2 |
| II. | SUCCESSES | 4 - 18 | 3 |
| III. | PROMISING CHANGES | 19 - 23 | 6 |
| IV. | UNFULFILLED EXPECTATIONS | 24 - 27 | 7 |


* The report was prepared by UNEP, as task manager for chapter 20 of Agenda 21, in accordance with arrangements agreed to by the Inter-Agency Committee on Sustainable Development (IACSD). It is the result of consultation and information exchange between United Nations agencies, international and national science organizations, interested government agencies and a range of other institutions and individuals.

97-01735 (E) 110297

/...

V. EMERGING PRIORITIES ..... 28 - 36 8

## I. KEY OBJECTIVES

1. This report reviews progress made in the implementation of the objectives set out in Chapter 20 of Agenda 21 (Environmentally sound management of hazardous wastes, including prevention of illegal international traffic in hazardous wastes),[1] taking into account the decisions taken by the Commission on Sustainable Development on this subject at its second session, in 1994. Chapter 20 of Agenda 21 addresses the need to develop environmentally sound management of hazardous wastes in ways that protect human health and the environment and ensure proper management of natural resources. It sets as overall objectives the prevention and minimization of hazardous wastes and the environmentally sound management of the remaining wastes.

2. Chapter 20 calls specifically for ratification or accession of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal and the expeditious elaboration of its related protocols, and for the elimination of the export of hazardous wastes. It also calls for the ratification and full implementation by the countries concerned of the Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa and the elaboration of a protocol on liability and compensation. Chapter 20 calls for international and regional cooperation to achieve the goals contained therein.

3. The four major programme areas of chapter 20 and their main objectives are outlined below.

### A. Promoting the prevention and minimization of hazardous wastes

(a) To reduce the generation of hazardous wastes, as part of an integrated cleaner production approach;

(b) To optimize the use of materials by recycling;

(c) To enhance knowledge of the economies of prevention and management of hazardous wastes.

### B. Promoting and strengthening institutional capacities in hazardous waste management

(a) To establish appropriate national measures and programmes in environmentally sound hazardous waste management;

(b) To promote research and development, human resources development, capacity-building and the dissemination of information concerning hazardous wastes.

C. Promoting and strengthening international cooperation in the management of transboundary movements of hazardous wastes

(a) To harmonize the procedure and criteria used for identifying waste and for controlling transboundary movements of hazardous wastes, particularly to countries that do not have the capacity to deal with those wastes in an environmentally sound way or that have banned the import of hazardous wastes;

(b) To promote the development of control procedures for transboundary movements that encourage environmentally and economically sound recycling operations.

D. Preventing illegal international traffic in hazardous wastes

(a) To halt illegal attempts to introduce hazardous waste into any State in contravention of national and international legislation;

(b) To assist all countries, in particular developing countries, in obtaining all appropriate information on illegal traffic in hazardous wastes;

(c) To provide appropriate assistance, within the framework of the Basel Convention, to countries that suffer the consequences of illegal traffic in hazardous wastes.

## II. SUCCESSES

4. Since 1992, the organizations of the United Nations have collectively or separately provided a platform for discussion, debate and coordination of hazardous waste management and cleaner production activities; information, guidance documents and training support to enable decision makers in Governments and in other parts of society to make environmentally sound decisions; and intergovernmental forums for the negotiation and implementation of instruments to assist countries with policies and measures for the management of hazardous waste and the control of transboundary movements of wastes.

Programme area A: Promoting the prevention and minimization of hazardous wastes

5. There is an increasing worldwide interest in a "cleaner production" approach, which can at the same time reconcile economic and environmental objectives. "Eco-efficiency" is now a term used, in particular by industry, to promote the effective implementation of this preventive approach. In addition, it has been recognized that the concept also applies to other economic sectors, in particular agriculture, health services and households. Training material has been developed by various international agencies to assist United Nations Member States in implementing cleaner production practices. For example, a "train-the-trainers" kit has been jointly produced by the International Chamber of Commerce (ICC), the Fédération internationale des ingénieurs (FIDIC) and the United Nations Environment Programme (UNEP) on environmental management systems,

which will assist in implementing the 14000 standard of the International Organization for Standardization (ISO). In addition, UNEP and the United Nations Industrial Development Organization (UNIDO) have jointly prepared a training kit for managers of national cleaner production centres. Progresses in cleaner production worldwide are regularly reviewed: every two years, UNEP convenes a high-level seminar involving the various partners in government, industry, non-governmental organizations and intergovernmental organizations, to assess achievements and barriers to the development of cleaner production and eco-efficiency, and to suggest future action. Since the Conference, such seminars have been held in Paris, Warsaw and Oxford.

6. A number of projects around the world, involving several organizations of the United Nations system, clearly demonstrate the results that can be achieved by the cleaner production approach. For example, a cleaner production project jointly implemented by the World Bank, UNEP and the Government of China led to the establishment of China's National Cleaner Production Centre, a network of institutions active in cleaner production, and to more than 150 Chinese professionals being qualified in environmental auditing. Proven annual benefits have been calculated at US$ 2.9 million in 27 enterprises alone, with a catalytic effect all over China.

7. Eight national cleaner production centres have now been established in Brazil, China, the Czech Republic, India, Mexico, Slovakia, the United Republic of Tanzania and Zimbabwe with support from UNIDO and UNEP. Another 43 similar centres in 37 countries, such as Indonesia, South Africa and Tunisia, have also been established by the countries themselves or with the support of bilateral organizations. All centres are now part of a worldwide network exchanging experience through workshops and newsletters.

8. Information on cleaner production technologies, policies and best practices has been increasingly made available at national and international levels. The UNEP International Cleaner Production Information Clearinghouse (ICPIC) contains about 600 bibliographic references, 300 cleaner production case studies, including cost benefit analyses, and a list of more than 100 organizations active in cleaner production. The information is available on paper and diskette and will soon be on the Internet. ICPIC has a corollary in UNIDO's information clearing house, INTIB, with its Energy and Environment Information System. A number of relevant publications have been produced, such as those from UNEP on life-cycle assessment, government policies and strategies for cleaner production.

9. The international financial institutions are now aware of the standards that the projects they are funding should achieve. For example, in cooperation with UNEP and UNIDO, the World Bank has adopted guidelines for its field project managers which emphasize the need for a cleaner production/pollution prevention approach.

10. The Economic Commission for Europe (ECE), through its Convention on Long-range Transboundary Air Pollution and related protocols on SOx and NOx compounds, has developed a by-products management policy, followed by branch-specific approaches for stationary installations covering all industrial

sectors relevant to transboundary pollution. The cyclical ECE seminars issue publications on control technology for emissions from stationary sources.

Programme area B: Promoting and strengthening institutional capacities in hazardous waste management

11. Over 100 countries are now Parties to the Basel Convention. The fourth meeting of the Conference of the Parties was held in October 1997. In order to assist in establishing appropriate national measures, the Convention secretariat has produced a number of publications, including various technical guidelines for the environmentally sound management of wastes subject to the Convention (organic solvents, used oils, PCBs, household wastes). It has also issued guidelines for the management of disposal facilities (landfill, incineration, oil re-refining), an updated model legislation on waste management, a compilation of national provisions, and guidance documents on the management of hazardous wastes and transboundary movements of hazardous wastes destined for recovery operations. A number of seminars have been held to increase awareness of the Basel Convention and of environmentally sound management of hazardous wastes, whether moved across frontiers or generated locally. Many countries have adopted legislation and established the necessary mechanisms to implement the Basel Convention.

12. In Latin America and the Caribbean, Africa, Central and Eastern Europe, Asia and the Pacific, there are plans for the establishment of regional or subregional centres for training and technology transfer regarding management of hazardous wastes and the minimization of their generation. The centres will work in close association on waste minimization issues with the national cleaner production centres. The regional centre for Eastern Europe, based in Slovakia, is now in operation.

13. The IMO Office for the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter has published the report of the Interagency Global Waste Survey, which includes country case studies of policies, measures and programmes in hazardous waste management. UNEP has undertaken an international survey of the situation with respect to contaminated sites. Technical guidelines and training material for site evaluation and remediation have been prepared with the assistance of various partners.

14. More adequate waste treatment facilities are now available in industrialized countries, economies in transition and developing countries. An increasing number of countries have developed or have national plans for hazardous waste management. Assistance has been increasingly given to developing countries to deal with immediate or acute problems (such as asbestos in buildings, PCB wastes, obsolete pharmaceuticals and pesticides).

Programme area C: Promoting and strengthening international cooperation in the management of transboundary movements of hazardous wastes

15. The third meeting of the Conference of the Parties to the Basel Convention, held in September 1995 in Geneva, adopted a decision to amend the Convention with respect to a prohibition by all Parties members of both the Organisation for Economic Cooperation and Development (OECD) and the European Union (EU) of

all transboundary movements of hazardous wastes that are destined for final disposal in other States. It also decided to phase out by 31 December 1997 and prohibit from that date all transboundary movements of hazardous wastes for recovery, recycling, reclamation, direct use or alternative uses from party members of OECD and EU to other States. This export ban will help strengthen the countries' existing import bans and be an incentive for them to minimize the generation of wastes at source. The Technical Working Group under the Convention is making progress in defining in an unambiguous way which hazardous wastes apply to the Convention.

16. The Bamako Convention came into force on 20 March 1996, 90 days after Cameroon ratified the instrument. At least 11 countries have ratified the Convention, and many more are expected to follow in the near future. Other regional protocols concerning the transboundary movements of hazardous wastes have entered into force (for example, in the Pacific region) or are being developed. Work continues on the preparation of a protocol on liability and compensation for damages resulting from transboundary movements or disposal of hazardous wastes.

17. The OECD continues to maintain and review its listing of hazardous waste (red, amber, green lists) concerning documentation requirements for transfrontier movements for recycling.

Programme area D: Preventing illegal international traffic in hazardous wastes

18. International cooperation, involving Interpol, inter alia, continues to help prevent illegal traffic in hazardous wastes, and major collaborative efforts are being made by the World Customs Organization, the secretariat of the Basel Convention, EU and OECD for the separate identification of hazardous wastes in a harmonized system of classification and labelling of chemicals, as mentioned in chapter 20 of Agenda 21.

## III. PROMISING CHANGES

19. Related cleaner production and eco-efficiency approaches are now recognized by an increasing number of Governments, and by business and industry as the way to reconcile environmental protection, effective management of natural resources and economic development. There is an increasing recognition that cleaner production patterns and adequate waste management cannot be successfully achieved exclusively through the use of adequate technologies, but that good management practices and systems must also be adopted.

20. Many countries are developing corresponding policies and strategies and setting up the necessary institutional framework to inform and train industry. The establishment of national cleaner production centres is one example of this progress.

21. Decision makers in government and industry now have access to quality and "user friendly" information on cleaner technologies, on technologies to treat hazardous wastes, on operating practices, and on policies required to achieve environmentally sound management of hazardous wastes. Information is provided

using various disseminating mechanisms, including new electronic systems and networks. An inventory of information sources on environmentally sound technologies is available, and a coordinating mechanism between the various providers of information is being created, facilitated by UNEP, better to identify users' need and avoid duplication of efforts.

22. Training and capacity-building are continuing through the publication and dissemination of UNEP's training manuals, including the translation of key manuals into Spanish, Russian and Chinese. The secretariat of the Basel Convention continues to organize regional training meetings in the context of its programme to develop regional centres. The education of future industry managers is also taking place, and UNEP together with the World Business Council for Sustainable Development and a number of educational institutions has undertaken a process to ensure the inclusion of the environmental dimension in the curriculum of business and engineering schools and universities.

23. The ECE countries have introduced the so-called 5-R policy and strategy which promotes reduction at source, replacement, recycling, recovery and reutilization, laying the ground for cleaner production programmes. Similarly, the ECE programme on environmental performance review, designed for countries in transition, offers a good opportunity to monitor changes due to the implementation of policies for environmentally sound production and consumption and due to the enforcement of international agreements. It could also provide a model for other regions.

## IV. UNFULFILLED EXPECTATIONS

24. In spite of the progress achieved towards environmentally sound management of hazardous wastes, financial and human resources are insufficient at both the national and international levels to fully implement chapter 20 of Agenda 21. When appropriate legislation and regulations do exist, they are often not complied with, due to lack of capacity or resources. Given that many countries, particularly in the developing world, lack adequate institutional capacity in hazardous waste management and in monitoring illegal imports of chemical and hazardous wastes, there is an urgent need for strengthening national capacity for the effective management of such wastes.

25. Technology choices made by countries still do not sufficiently take into account their overall environmental impact, in particular, the impact on wastes. There is a pressing need to accelerate the introduction of cleaner technologies that generate less hazardous waste in the first place, as opposed to continued reliance on more expensive and more environmentally dangerous end-of-pipe clean-up measures. Greater efforts are required at the international level to ensure adequate transfers of cleaner technologies, including transfers on a preferential or non-commercial basis, particularly to developing countries.

26. The need to control illegal traffic in wastes has led to regulations and procedures which might present difficulties for genuine recycling of some wastes, particularly by financially strapped institutions in both the public and private sectors. Small- and medium-size enterprises are often difficult to

reach, and still see "eco-efficiency" as an additional cost, not as a potential source of benefits.

27. In spite of efforts undertaken to facilitate the transfer of environmentally sustainable technologies,[2] there is still a need to enhance the transfer of more up-to-date technologies and to develop new techniques for cleaner production and waste reuse.

## V. EMERGING PRIORITIES

28. While the focus has so far been put on the reduction of hazardous wastes from industrial processes, there is now need to develop ways to reduce hazardous wastes from other sources: hospitals, agriculture, domestic use, etc., through the redesign of products and improved operational practices. Goods for final consumption, such as electronic appliances, refrigeration and cars, need to be thoroughly addressed.

29. There is now need also to address the demand side of goods and services and reconsider consumption patterns.[3]

30. Contamination of soil and water (both surface and groundwater), resulting from past inadequate management of wastes, is gradually being given higher priority in developing countries and in countries in transition, as consciousness of its health impacts increases.[4]

31. In the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities,[5] persistent organic pollutants (POPs) are a priority concern. The control of discharges, direct or indirect, of hazardous wastes into the marine environment is part of this emerging priority.

32. The continued use of outdated technologies which contribute to the generation of unnecessary hazardous waste remains a problem, particularly in developing countries and economies in transition, and needs further attention by both Governments and international agencies.

33. Continued improvement in pollution prevention and efficient use of raw materials will probably not suffice to bring about the needed increase (by a factor of 4-6) in the productivity of the use of raw materials to achieve sustainable development. Technological innovations and breakthroughs are also required. Partnerships at the local, national and international levels, involving all stakeholders, must continue to be developed. Simultaneously, negotiated agreements by industry sectors, specifying quantitative targets, to minimize wastes and other emissions, should be increasingly used.

34. There is an urgent need to devote increased attention to the provision of adequate occupational safety and health conditions for workers involved in the management of hazardous wastes, including minimization, disposal and remediation activities.

35. Infectious material in health care waste emerges as a priority concern, particularly with the spread of AIDS. This includes not only hospital wastes but also other medical material discarded by health care facilities.

36. There is a need to develop better indicators to monitor progress in implementation in environmentally sound hazardous waste management and in controlling illegal traffic in hazardous wastes, particularly to developing countries.

Notes

[1] Report of the United Nations Conference on Environment and Development, vol. I, Resolutions Adopted by the Conference (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

[2] See also E/CN.17/1997/2/Add.37.

[3] See also E/CN.17/1997/2/Add.3.

[4] See also E/CN.17/1997/2/Add.17.

[5] A/51/116, annex II.

---